# UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/024,412 | 12/17/2001 | Ka Cheong Leung | 6173/5006US | 5304 |

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| EXAMINER |
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| ART UNIT | PAPER NUMBER |
|---|---|
| 2685 | |

DATE MAILED: 12/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

| | Application No. | Applicant(s) |
|---|---|---|
| **Office Action Summary** | 10/024,412 | LEUNG ET AL. |
| | Examiner | Art Unit |
| | Duc M. Nguyen | 2685 |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☐ Responsive to communication(s) filed on <u>05 August 2004</u>.

2a)☐ This action is **FINAL**.       2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) <u>1-51</u> is/are pending in the application.

    4a) Of the above claim(s) <u>28-51</u> is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-27</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _____ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>9/23/02, 7/2/04</u>.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

## DETAILED ACTION

This action is in response to the applicant 's response filed on 8/5/04. Claims 1-51 are now pending in the present application.

### *Information Disclosure Statement*

1.      The references listed in the information disclosure statements submitted on 9/23/02 and 7/2/04 have been considered by the examiner (see attached PTO-1449).

### Election/Restriction

2.      Applicant's election without traverse of group I (claim 1) in the reply filed on 6/24/04 is acknowledged.

Applicant's election with traverse of group I (claims 1-27) in the reply filed on 8/5/04 is acknowledged.  The traversal is on the ground(s) that no serious burden and/or further searching based on the claim grouping in the restriction is necessary. This is not found persuasive because invention I (claims 1-27) has separate utility such as providing wireless communications between a mobile station and a network station utilizing a profile-specific dictionary which comprises setup messages, codes, or request dictionary messages. The invention II (claims 28-40) has separate utility such as providing a synchronizing dictionaries method utilizing a checkpoint dictionary and a rollback initiating event which comprises species such as error-detecting code mismatch or timer expiration while group III (claims 41-51) is directed to a dictionary module (classified in classes 704, 715 and 341) utilizing a plurality of dictionaries including a

combination of a dynamic dictionary and a static profile-specific dictionary. See MPEP §

806.05(d).

. Because these inventions are distinct for the reasons given above and have

acquired a separate status in the art as shown by their different classification (see

Restriction requirement mailed on 7/8/04), and the search required for Group II (i.e,

synchronizing features) is not required for Groups I or III, restriction for examination

purposes as indicated is proper.

Accordingly, the requirement is still deemed proper and is therefore made FINAL.


3.      Claims **28-51** are withdrawn from further consideration pursuant to 37 CFR

1.142(b), as being drawn to a nonelected invention, there being no allowable generic or

linking claim. Applicant timely traversed the restriction (election) requirement in the reply

filed on 8/5/04.

### *Claim Rejections - 35 USC § 102*

4.      The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5.      Claims **1, 3, 8, 10** are rejected under 35 U.S.C. 102(a) as being anticipated by

Sharpe (US 6,085,069).

Regarding claim **1**, **Sharpe** discloses a method for providing wireless communication between a mobile station (pager or cellular phone, see col. 7, lines 21-25) and a network station using a context for message compression, comprising:

storing persistently profile-specific information in a profile-specific dictionary (see col. 6, lines 1-37 regarding telephone numbers); and

providing communication between the mobile station and the network station using the profile-specific dictionary for message compression (see Abstract, and col. 6, lines 56-59).

Regarding claim **3**, **Sharpe** further discloses the profile comprises user information (see col. 6, lines 10-16 regarding telephone numbers).

Regarding claim **8**, the claim is rejected for the same reason as set forth in claim 3 above. In addition, it is clear that **Sharpe** would disclose a computer-processable medium as claimed (see control processor in Fig. 3).

Regarding claim **10**, **Sharpe** further discloses the profile comprises user information (see col. 6, lines 10-16 regarding telephone numbers).

## Claim Rejections - 35 USC § 103

6.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7.      Claims **2, 4, 5, 7, 9, 11, 13** are rejected under 35 U.S.C. 103(a) as being

unpatentable over **Sharpe**.

Regarding claim **2**, the claim is rejected for the same reason as set forth in claim

1 above. In addition, since the device information such as its identity is included in the

header of a message, it is clear that such identity would obviously be one of most

frequently used item in a message. Therefore, it would have been obvious to one skilled

in the art to modify **Sharpe** to further include most frequently used device information

such as its identity in the dictionary, for further improving the compression ratio of the

message.

Regarding claim **4**, **Sharpe** fails to disclose a removable identity module (SIM

card). However, using a SIM card as an external storage for storing user information is

well known in the art. Therefore, it would have been obvious to one skill in the art to

modify **Sharpe** to provide a removable identity module (SIM card) as claimed, for

extending memory capability of the mobile device with an external storage.

Regarding claim **5**, the claim is rejected for the same reason as set forth in claim

3 above. In addition, since the profile-specific dictionary is dedicated to user information

such as telephone numbers as disclosed by **Sharpe** (see **col. 6, lines 10-16**), it would

have been obvious to one skill in the art to modify **Sharpe** to provide a plurality of

profile-specific dictionaries as claimed, so that an optimum compression dictionary for

each of a plurality of mobile stations would be obtained.

Regarding claim **7**, the claim is rejected for the same reason as set forth in claim

1 above. In addition, it is clear that in order to compress and/or decompress a message,

a code or software program should be utilized and would obviously be downloaded to the control processor 54 shown in Fig. 3 of **Sharpe**, in order to perform the above compression/decompression algorithm.

Regarding claims **9, 11, 13**, the claims are rejected for the same reason as set forth in claims **2, 5, 7** above, respectively.

8.　　Claims **6, 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Sharpe** in view of **Bellovin (EP 0933876)**.

Regarding claim **6, Sharpe** fails to disclose protocol-specific information in a static dictionary. However, **Bellovin** discloses a data compression method for packet transmission, wherein a plurality of static dictionaries are used, wherein one of the static dictionary comprise protocol-specific information (see col. 5, lines 1-9). Therefore, it would have been obvious to one skill in the art to further incorporate Bellovin's teaching to Sharp to provide a protocol-specific information in a static dictionary as claimed, for further improving the compression ratio of the communication signal.

Regarding claim **12**, the claim is rejected for the same reason as set forth in claim 6 above.

9.　　Claims **14, 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Bellovin (EP 0933876)**.

Regarding claim **14, Bellovin** discloses a data compression method for packet transmission, comprising

receiving a setup message from a mobile station (see col. 4, lines 4-6);

searching for a common dictionary based on the setup message (see col. 4, lines 7-9, 24-29),

attempting to validate the common dictionary when the common dictionary is found (see col. 4, lines 40-46). Here, with the broadest reasonable interpretation, in order to select the appropriate static dictionary based on the data type to be employed in that given transmission, it is clear that the selected dictionary would obviously be validated before it is selected.

providing a common dictionary identifier associated with the common dictionary to the mobile station when the common dictionary is validated (see col. 4, lines 10-12, 24-29; and

communicating with the mobile station using the common dictionary (see col. 4, lines 24-29).

Therefore, the claimed limitations are made obvious by Bellovin for validating a dictionary as claimed, in order to ensure the appropriate static dictionary is selected according to the data type to be employed in that given transmission.

Regarding claim **21**, the claim is rejected for the same reason as set forth in claim 14 above. In addition, it is clear that **Bellovin** would disclose the static dictionary comprise protocol-specific information as claimed (see **col. 5, lines 1-9**).

10.     Claims **15-16** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Bellovin** in view of **Mitzenmacher et al (US 5,953,503)**.

Regarding claim **15**, the claim is rejected for the same reason as set forth in claim 14 above. In addition, since **Bellovin** discloses a particular dictionary could be download from some other terminals in the network (see **col. 4, lines 48-52**), it is clear that such terminal would obviously be a compression server as disclosed by **Mitzenmacher** (see **Abstract, Fig. 1**). Therefore, it would have been obvious to one skilled in the art to further incorporate **Mitzenmacher's** teaching to **Bellovin** for providing a compression server as claimed, so that both communication terminals would be able to access the server for downloading a common dictionary that is particular suited to the session.

Regarding claim **16**, the claim is rejected for the same reason as set forth in claim 15 above. In addition, it is clear that **Mitzenmacher** and **Bellovin** would disclose a dictionary identifier as claimed (see **Bellovin**, col. 4, lines 9-11 and **Mitzenmacher**, Abstract, regarding the fingerprint), in order to ensure that a common dictionary is used by both terminals.


11.    Claims **17-20, 22-27** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Bellovin** in view of **Sharpe**.

Regarding claim **17**, the claim is rejected for the same reason as set forth in claim 14 above. However, **Bellovin** fails to disclose a profile-specific dictionary. However, **Sharpe** discloses a method for providing wireless communication using a context for message compression, wherein a profile-specific dictionary is used (see col. 6, lines 1-37). Since **Bellovin** suggests using a plurality of dictionaries, each dedicated

to the type of text or information regarding the data type involved in the transmission (see paragraph [0017], it would have been obvious to one skilled in the art to further incorporate **Sharpe's** teaching to **Bellovin** for providing a profile-specific dictionary as claimed, for further improving the compression ratio of the message (or increasing system capacity) by utilizing a dictionary including most frequently used data.

Regarding claim **18**, the claim is rejected for the same reason as set forth in claim 17 above. In addition, since the device information such as its identity is included in the header of a message, it is clear that such identity would obviously be one of most frequently used item in a message. Therefore, it would have been obvious to one skill in the art to modify **Sharpe** to further include most frequently used device information such as its identity, for further improving the compression ratio of the message. Therefore, it would have been obvious to one skill in the art to further modify **Sharp** and **Bellovin** to incorporate device information to the profile-specific dictionary as claimed, for further improving the compression ratio of the message.

Regarding claim **19**, the claim is rejected for the same reason as set forth in claim 17 above. In addition, **Sharpe** further discloses the profile comprises user information (see col. 6, lines 10-16).

Regarding claim **20**, the claim is rejected for the same reason as set forth in claim 17 above. In addition, since the profile-specific dictionary is dedicated to user information such as telephone numbers as disclosed by **Sharpe** (see **col. 6, lines 10-16**), it would have been obvious to one skill in the art to modify **Sharpe** and **Bellovin** to

provide a plurality of profile-specific dictionaries as claimed, so that an optimum

compression dictionary for each of a plurality of mobile stations would be obtained.

Regarding claims **22-24, 26**, the claims are interpreted and rejected for the same

reason as set forth in claims **17-19, 20** above, respectively, wherein it is clear that the

mobile station in **Bellovin** would comprise a dictionary module, a compressor and a

decompressor as claimed.

Regarding claim **25, Sharpe** and **Bellovin** as modified fails to disclose a

removable identity module (SIM card). However, using a SIM card as an external

storage for storing user information is well known in the art. Therefore, it would have

been obvious to one skill in the art to modify **Sharpe** and **Bellovin** to provide a

removable identity module (SIM card) as claimed, for extending memory capability of

the mobile device with an external storage.

Regarding claim **27**, the claim is rejected for the same reason as set forth in

claim 14 above. In addition, it is clear that **Bellovin** would disclose the static dictionary

comprise protocol-specific information as claimed (see **col. 5, lines 1-9**).


### *Conclusion*

12.    The prior art made of record and not relied upon is considered pertinent to
applicant's disclosure.

   **Smith** (US 6,414,610), Data compression.

   **Heath** (US 6,292,115), Data compression for use with a communications

channel.

**Defosse** et al (US 2003/0097474), Method and system for the efficient communication of data with and between remote computing device.

13. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

(703) 872-9314 (for formal communications intended for entry)

(for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington VA, Sixth Floor (Receptionist).

Any inquiry concerning this communication or communications from the examiner should be directed to Duc M. Nguyen whose telephone number is (703) 306-4531, Monday-Thursday (9:00 AM - 5:00 PM). Or to Edward Urban (Supervisor) whose telephone number is (703) 305-4385.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4700.

Duc M. Nguyen

Dec 8, 2004